Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed

1.1. Name of the Data, data collection Project, or data-producing Program:
2013 Lidar: St. Johns County, FL

1.2. Summary description of the data:
St. Johns County, Florida (County) has developed a comprehensive countywide base mapping and GIS enhancements to support master drainage planning, transportation planning, and preliminary engineering and wetland preservation studies. As part of this effort, Woolpert was contracted by Jones, Edmunds & Associates (JEA) to develop the new imagery and new DTM. The project consists of new 6-inch 4-Band Orthoimagery, new 1-meter max LiDAR, new 1-foot contours, updating of topographic/planimetric features. This data set is one component of a digital terrain model (DTM) for St. Johns County. The dataset is comprised of mass points, 2-D and 3-D breakline features, 1-foot and 2-foot contours, ground control, vertical test points, and a footprint of the data set, in the ESRI ArcGIS File Geodatabase format. In accordance with the counties specifications, the following breakline features are contained within the database: closed water bodies (lakes, reservoirs, etc) as 3-D polygons; linear hydrographic features (streams, shorelines, canals, swales, embankments, etc) as 3-D breaklines; coastal shorelines as 3-D linear features; edge of pavement road features as 3-D breaklines; soft features (ridges, valleys, etc.) as 3-D breaklines; island features as 3-D polygons; concretedam, culvert, footprint, lowconfidence, lowconfidenceanno, overpass, pipe, roadcenterlineoverbridge and swamppoint as 2-D features. Contours were generated from LiDAR ground class and breaklines and meet National Map Accuracy Standards. The LiDAR masspoints are delivered in the LAS file format based on the Florida statewide 5,000' by 5,000' grid. The GEOID model used to reduce satellite derived elevations to orthometric height is GEOID12A. Breakline features were captured to develop a hydrologically correct DTM. The coastalshoreline has a constant value of -0.6' that was statistically derived from the LiDAR point cloud collected within the 2-hour window of MLL tide. 2008 Hydrographic and soft features were used to supplement the 2013 breaklines in Low Confidence areas.

The NOAA Office for Coastal Management (OCM) received the lidar point data from St. Johns County GIS in March 2018 and processed the data to be available for download from the Data Access Viewer (DAV) and via https . OCM noted that many points that fall

on buildings, bridge decks, light poles, cell phone towers, are classified as 5 - high vegetation.

In addition to these lidar point data, the bare earth Digital Elevation Models (DEM) created from the lidar point data are also available. These data are available for custom download at the link provided in the URL section of this metadata record.

Planimetric and breakline data are also available. These data are available for download at the link provided in the URL section of this metadata record. Please note that these products have not been reviewed by the NOAA Office for Coastal Management (OCM) and any conclusions drawn from the analysis of this information are not the responsibility of NOAA or OCM.

1.3. Is this a one-time data collection, or an ongoing series of measurements?
One-time data collection

1.4. Actual or planned temporal coverage of the data:
2013-01-11, 2013-01-12, 2013-01-14, 2013-01-17, 2013-01-20, 2013-01-22, 2013-01-25

1.5. Actual or planned geographic coverage of the data:
W: -81.700529, E: -81.192498, N: 30.261275, S: 29.613391

1.6. Type(s) of data:
(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Point Cloud (Digital)

1.7. Data collection method(s):
(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)

1.8. If data are from a NOAA Observing System of Record, indicate name of system:

1.8.1. If data are from another observing system, please specify:

2. Point of Contact for this Data Management Plan (author or maintainer)

2.1. Name:
NOAA Office for Coastal Management (NOAA/OCM)

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:
NOAA Office for Coastal Management (NOAA/OCM)

2.4. E-mail address:

coastal.info@noaa.gov

2.5. Phone number:
(843) 740-1202

3. Responsible Party for Data Management
Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:

3.2. Title:
Data Steward

4. Resources
Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):

5. Data Lineage and Quality
NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible
(describe or provide URL of description):
Process Steps:
- Airborne terrestrial LiDAR was collected for St. Johns County, FL. The LiDAR system acquisition parameters were developed based on a maximum average ground sample distance of 3.23 feet. A Leica ALS70 LiDAR sensor was used for acquisition. Acquisition specifications for the sensor were as follows: Field of View (full angle) - 40 degrees, Nominal flight altitude (AGL) - 6500 feet, Airspeed - 172 mph (150 knots), Laser pulse rate - 270,000 Hz, Nominal swath width (on ground) - 4732 feet, Maximum cross track point spacing - 2.98 feet, Maximum along track point spacing - 3.01 feet, Average point spacing - 3.28 feet, Flight line spacing - 3314 feet, Side overlap - 29.3 percent. Prior to the LiDAR acquisition, the system underwent a system calibration to verify the operational accuracy and misalignment angles. LiDAR data acquisition only occurred when the sky was sufficiently clear of clouds, smoke, and atmospheric haze. The LiDAR data was processed immediately following the acquisition to verify the coverage had no voids. The GPS and IMU data was post processed using differential and kalman filter algorithms to derive a

smoothed best estimate of trajectory. The quality of the solution was verified to be consistent with the accuracy requirements of the project. The ground control system to support the LiDAR survey consisted of 24 control points surveyed specifically for this project. The LiDAR data was post processed and verified to be consistent with the project requirements in terms of post spacing and absence of artifacts. The point cloud underwent classification to determine bare-earth points (class 2), low vegetation points (class 3), medium vegetation points (class 4), high vegetation points (class 5), building points (class 6) noise points (class 7), water returns (class 9), breakline proximity points (class 10), bridge points (class 13, canopy/covered walkway points (class 14) and unclassified data (class 1).
- 2019-03-25 00:00:00 - The NOAA Office for Coastal Management (OCM) received the data from the St. Johns County, Florida GIS Department. The data were in Florida State Plane East NAD83 (HARN) coordinates (US survey feet) and NAVD88 (Geoid12A) elevations in US survey feet. The data were classified as: 1 - Unclassified, 2 - Ground, 3 - Low vegetation, 4 - Medium vegetation, 5 - High vegetation, 6 - Buildings, 7 - Low Noise, 9 - Water,13 - Bridges, 14 - Canopy/covered walkway. OCM processed all classifications of points to the Digital Coast Data Access Viewer (DAV). Classes available on the DAV are: 1, 2, 3, 4, 5, 6, 7, 9, 13, 14. OCM noted that many points that fall on buildings, bridge decks, light poles, cell phone towers, are classified as 5 - high vegetation.   OCM performed the following processing on the data for Digital Coast storage and provisioning purposes: 1. The LAStools software scripts lasinfo and lasvalidate were run on the laz files to check for errors. 2. The LAStools software script laszip was run on the las files to convert them to laz format.   3. An internal OCM script was run to check the number of points by classification and by flight ID and the gps and intensity ranges. 4. Internal OCM scripts were run on the laz files to convert from orthometric (NAVD88) elevations to ellipsoid elevations using the Geoid 12A model, to convert from Florida State Plane East coordinates in feet to geographic coordinates, to convert from vertical units of feet to meters, to assign the geokeys, to sort the data by gps time and zip the data to database and to http.

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?

No

6.1.1. If metadata are non-existent or non-compliant, please explain:
Missing/invalid information:
- 1.7. Data collection method(s)
- 3.1. Responsible Party for Data Management
- 4.1. Have resources for management of these data been identified?
- 4.2. Approximate percentage of the budget for these data devoted to data management
- 5.2. Quality control procedures employed
- 7.1. Do these data comply with the Data Access directive?
- 7.1.1. If data are not available or has limitations, has a Waiver been filed?
- 7.1.2. If there are limitations to data access, describe how data are protected
- 7.4. Approximate delay between data collection and dissemination
- 8.1. Actual or planned long-term data archive location
- 8.3. Approximate delay between data collection and submission to an archive facility
- 8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

6.2. Name of organization or facility providing metadata hosting:
NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:
https://www.fisheries.noaa.gov/inport/item/55935

6.4. Process for producing and maintaining metadata
(describe or provide URL of description):
Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf

7. Data Access
NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?

7.1.1. If the data are not to be made available to the public at all, or with

limitations, has a Waiver (Appendix A of Data Access directive) been filed?

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

7.2. Name of organization of facility providing data access:
NOAA Office for Coastal Management (NOAA/OCM)

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:
https://coast.noaa.gov/dataviewer/#/lidar/search/where:ID=8698
https://coast.noaa.gov/htdata/lidar2_z/geoid12b/data/8698

7.3. Data access methods or services offered:
Data is available online for bulk and custom downloads.

7.4. Approximate delay between data collection and dissemination:

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

8. Data Preservation and Protection
The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:
(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)

8.1.1. If World Data Center or Other, specify:

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):
Office for Coastal Management - Charleston, SC

8.3. Approximate delay between data collection and submission to an archive facility:

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection

9. Additional Line Office or Staff Office Questions

Line and Staff Offices may extend this template by inserting additional questions in this section.